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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,921	11/30/2000	Michael M. Gawargy	9-13528-112US KD/bm	9761
20988	7590	05/27/2005	EXAMINER	
OGILVY RENAULT LLP 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A2Y3 CANADA			PHAN, MAN U	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/725,921

Applicant(s)

GAWARGY ET AL.

Examiner

Man Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-52 and 54-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49-52 and 54-71 is/are allowed.
- 6) ☒ Claim(s) 1-4, 10, 11, 14, 20, 25-28, 34, 35 and 38 is/are rejected.
- 7) ☒ Claim(s) 5-9, 12-13, 15-16-19, 21-24 and 29-33, 36-37, 39-48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Amendment and Argument***

1. This communication is in response to applicant's 12/23/2004 Amendment in the application of Gawargy et al. for a "Session initiation protocol based advanced intelligent network/intelligent network messaging" filed 11/30/2000. The proposed amendment to the claims and response have been entered and made of record. Claims 49 has been amended and claim 53 has been canceled per Applicant's request. Claims 1-52 and 54-71 are pending in the present application.

2. Applicant's amendment to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C. 103 as discussed below. Applicant's remarks with respect to the pending claims have been fully considered, but they are not persuasive for at least the following reasons.

3. Applicant's argument with respect to the rejected claims 1 and 25 (page 14, fourth paragraph and page 15, first paragraph) that the cited reference "*do not teach the encapsulates functional content of a transaction message in a PDU of GPRS network*". However, Forslow (US#6,608,832) discloses in Fig. 2 shown a more detailed mobile communications system using the example GSM mobile communications model that supports both circuit-switched and packet-switched communications and includes a circuit-switched network 35 and a packet-switched network 51. Within the GPRS network 51, packets or protocol data units (PDUs) are encapsulated at an originating

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GPRS support node and decapsulated at the destination GPRS support node (*PDU is encapsulated and transmitted between the BSC and the SGSN by the Base Station Subsystem GPRS Protocol (BSSGP)*). This encapsulation/decapsulation at the IP level between the SGSN 50 and the GGSN 54 is called "tunneling" in GPRS. The GGSN 54 maintains routing information used to "tunnel" PDUs to the SGSN 50 currently serving the mobile station. A common GPRS Tunnel Protocol (GTP) enables different underlying packet data protocols to be employed even if those protocols are not supported by all of the SGSNs. All GPRS user-related data needed by the SGSN to perform routing and data transfer functions is accessed from the HLR 42 via the SS7 network 40. The HLR 42 stores routing information and maps the IMSI to one or more packet data protocol (PDP) addresses as well as mapping each PDP address to one or more GGSNs (*user IP packets are encapsulated consecutively in GTP (GPRS Tunneling Protocol) PDUs (Packet Data Units), UDP (User Datagram Protocol) PDUs and IP PDUs for the routing through the core network*)(Col. 4, lines 9 plus). As depiction in Fig. 7 in Forslow, a circuit-switched bearer is shown as a V.110 modem employing an IP/PPP protocol, and a packet-switched bearer is shown as a GPRS modem employing IP over SNDCP protocol. A circuit-switched modem connection is established by dialing a telephone number to establish a dedicated connection where individual IP packets are not routed. Point-to-point protocol (PPP) is an encapsulation protocol used to carry IP packets over any serial line, dial up connections and therefore is well suited for circuit-switched bearers. Conversely, the GPRS modem routes each IP packet based on its header information. The subnetwork dependence convergence protocol (SNDCP) provides segmentation and compression of headers and data between the mobile station

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and the SGSN in the GPRS. The SMDCP is specifically developed to carry IP packets directly thereby avoiding PPP (Col. 12, lines 18 plus). The packet-switched application flows are transferred using DHCP/IP/GPRS tunneling protocol. DHCP is only applied at configuration time. Subsequent IP packets (after configuration) are carried directly on the GPRS bearer. The GPRS tunneling protocol (GTP) encapsulates the end-to-end IP packets between the serving and gateway node, and similar to L2TP, utilizes the underlying IP network as the transport mechanism between the GPRS serving and gateway nodes. Accordingly, both circuit-switched and packet-switched data from the MSC 110 and the SGSN 114, respectively, to the GGSN 116 is by way of IP tunnels. The use of IP as a transport mechanism provides flexible and scalable implementation of the mobile communications backbone using the Internet as the base (*PDU is encapsulated and transmitted between the BSC and the SGSN by the Base Station Subsystem GPRS Protocol (BSSGP)*) (See also Fig. 9, Col. 14, lines 63 plus).

Therefore, the Examiner maintains that the references cited and applied in the last office actions for the rejection of the claims are maintained in this office action.

### ***Claim Objections***

4. Claims 5-7, 25, 29-31, 49 are objected to because of the following informalities: The claim contains the phrase "adapted to". It has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-4, 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreppel (US#6,574,201) in view of Forslow (US#6,608,832).

With respect to claims 25-28, Kreppel (US#6,574,201) and Forslow (US#6,608,832) disclose a novel method and system for telephony services deployed in a broadband packet network, according to the essential features of the claims. Kreppel discloses in

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Figs. 1 & 3 a block diagram and flow chart illustrated the network architecture of a mobile radio telephone network for handling the packet data service via intelligent network, in which the transmission of packet data to and from a communication terminal of a subscriber of the mobile radio telephone network, comprising the steps of connecting via an interface, a service network node of the mobile telephone network to an access node interconnected to a packet data network; incorporating a service switching function of the intelligent network in the service network node of the mobile radio telephone network; and connecting a service control function of the intelligent network to the service network node (Col. 1, lines 64 plus and Col. 9, lines 33 plus).

However, Krepple does not disclose expressly the step of providing encapsulating at least a functional content of a transaction message in a PDU of the broadband packet network. In the same field of endeavor, Forslow (US#6,608,832) teaches in Fig. 2 a more detailed diagram showing a GSM mobile communication system including a General Packet Radio Service (GPRS) data network, in which within the GPRS network 51, packets or protocol data units (PDUs) are encapsulated at an originating GPRS support node and decapsulated at the destination GPRS support node. This encapsulation/decapsulation at the IP level between the SGSN 50 and the GGSN 54 is called "tunneling" in GPRS. The GGSN 54 maintains routing information used to "tunnel" PDUs to the SGSN 50 currently serving the mobile station. A common GPRS Tunnel Protocol (GTP) enables different underlying packet data protocols to be employed even if those protocols are not supported by all of the SGSNs. All GPRS user-related data needed by the SGSN to perform routing and data transfer functions is accessed from the HLR 42 via the SS7 network 40. The HLR 42 stores routing information and maps the

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IMSI to one or more packet data protocol (PDP) addresses as well as mapping each PDP address to one or more GGSNs (Col. 3, lines 35 plus). Forslow further discloses in Fig. 3 illustrated example data communication protocols employed between different nodes in the packet-switched, GPRS data communications network in GSM, in which a GPRS "transmission plane" is modeled with multi-layer protocol stacks. Between the GGSN and the SGSN, the GPRS tunneling protocol (GTP) tunnels the PDUs through the GPRS backbone network 52 by adding routing information to encapsulate PDUs (*encapsulating the functional content of a transaction message in PDUs*). The GTP header contains a tunnel end point identifier (TID) for point-to-point and multicast packets as well as a group identity (GID) for point-to-multipoint packets. Additionally, a type field that specifies the PDU type and a quality of service profile associated with a PDP context session is included. Below the GTP, the well-known Transmission Control Protocol/User Datagram Protocol (TCP/UDP) and Internet Protocol (IP) are used as the GPRS backbone network layer protocols. Ethernet, frame relay (FR), or asynchronous transfer mode (ATM)-based protocols may be used for the link and physical layers depending on the operator's network architecture (Col. 4; lines 9 plus).

Regarding claims 1-4, they are method and system claims corresponding to the apparatus claims 25-28 above. Therefore, claims 1-4 are analyzed and rejected as previously discussed with respect to claims 25-28.

One skilled in the art would have recognized the need for effectively and efficiently distributing transaction oriented telephony functionality in a broadband packet network utilizing INAP and TCAP protocols, and would have applied Forslow's teaching of the



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“tunneling” in General Packet radio Service (GPRS) incorporated into existing circuit switched network into Kreppel’s novel use of the mobile radio telephone network for handling the packet data service via IN architecture. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Forslow’s common access between a mobile communications network and an external network with selectable packet-switched and circuit switched services into Kreppel’s method and mobile radio telephone network for handling a packet data service with the motivation being to provide a method and system for enabling IN/AIN functionality for telephony services deployed in a broadband packet network.

8. Claims 34-35, 38 and 10-11, 14, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreppel (US#6,574,201) in view of Forslow (US#6,608,832) as applied to the claims above, and further in view of Douglas et al. (US#6,363,424).

With respect to claims 34-35, 38, these claims differ from the claims above in that the claims require the mapping transaction message onto the PDU, mapping an encoded message payload into a payload of the PDU, and wherein the transaction message is an INAP message. In the same field of endeavor, Douglas et al. (US#6,363,424) discloses an IN services to IP end-point subscribers, in which call model state machine utilizing state-level map between states in the IN call model and the corresponding states in the base call model. Douglas’s invention thus also contemplates interfacing other base protocols such as Session Initiation Protocol (SIP) with other service protocols such as Transaction Capabilities Application Part (TCAP) or Intelligent Network Application Part (INAP), and variations thereof (See Fig. 1; Col. 2, lines 13 plus; Col. 4, lines 58

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plus). An SCP simulator was programmed to receive requests from IP end-points encoded in the TCAP/IP format. All requests received are processed appropriately and a TCAP/IP response generated. This response is routed back to the client (soft SSP) that originated the request. Reuse of existing service logic on the SCP requires a careful encoding of service requests at the SSP end to conform to established guidelines so that the SCP may process the requests it receives, and generate the appropriate responses (Col. 13, lines 50 plus).

Regarding claims 10-11, 14, 20, they are method and system claims corresponding to the apparatus claims 34-35, 38 above. Therefore, claims 10-11, 14, 20 are analyzed and rejected as previously discussed with respect to claims 34-35, 38.

One skilled in the art would have recognized the need for effectively and efficiently distributing transaction oriented telephony functionality in a broadband packet network utilizing INAP and TCAP protocols, and would have applied Douglas's teaching of the SIP interfacing with other service protocols such as TCP/INAP protocols and Forslow's teaching of the "tunneling" in General Packet radio Service (GPRS) incorporated into existing circuit switched network into Kreppel's novel use of the mobile radio telephone network for handling the packet data service via IN architecture. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Douglas' reuse of services between different domains using state machine mapping techniques, and Forslow's common access between a mobile communications network and an external network with selectable packet-switched and circuit switched services into Kreppel's method and mobile radio telephone network for handling a packet data service with the motivation being to provide a method

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and system for enabling IN/AIN functionality for telephony services deployed in a broadband packet network.

*Allowable Subject Matter*

9. Claims 5-9, 12-13, 15-16-19, 21-24 and 29-33, 36-37, 39-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest wherein the node comprises either one of a media gateway controller adapted to enable telephony signal traffic through the broadband packet network, and an application server adapted to invoke IN/AIN functionality using TCAP functional content; a CCS network element adapted to send and receive PDU's of the broadband packet network; and a network element of the broadband packet network; means for formulating a transaction message and means for inserting the formulated transaction message into a payload portion of the PDU, as recited in the claims. The prior art of record also fails to disclose or suggest wherein the means for mapping comprises means for mapping a TCAP/INAP message type onto a respective message type of the PDU, mapping a transaction message parameter onto a respective PDU message parameter; and wherein the encoded message payload is mapped into a payload portion of a MIME part of the PDU, as specifically recited in the claims.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Friedlander et al. (US#6,122,363) is cited to show the multi-protocol interface apparatus at a service control point.

The Lager et al. (US#6,636,502) is cited to show the GPRS-Subscriber selection of multiple internet service providers.

The Fonden et al.(US 2004/0202156) is cited to show the method and devices to provide a defined quality of service in a packet switched communication network.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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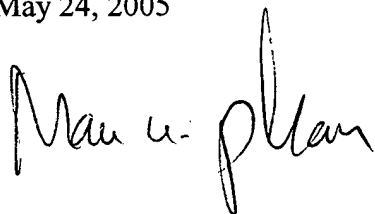
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3988. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

May 24, 2005

A handwritten signature in black ink, appearing to read "M. Phan" or "Mau u. phan", written in a cursive style.